Digi Transport WR Family

Enterprise Class Wi-Fi to Cellular Routers

Flexible, enterprise class cellular routers for remote and mobile networking applications.

Overview

The Digi TransPort WR family of cellular routers offers an all-in-one mobile communications solution with true enterprise class routing, security and firewall. These multifunction cellular routers feature a flexible design with optional integrated Wi-Fi access point (with multi SSID) / Client, USB, serial and 4-port Ethernet switch, as well as a variety of configuration options including multiple serial ports (async or sync), GPS or I/O telemetry modules.

The Digi TransPort family offers an advanced routing, security and firewall feature set including stateful inspection firewall and integrated VPN. Enterprise class protocols incorporate BGP, OSPF and VRRP+, a patented technology built upon the popular VRRP failover standard providing true auto sensing, auto failure and auto recovery of any line drop.

Digi TransPort WR routers are ideal for transportation and mobile applications. Flexible power options include 11-58VDC barrel or Molex connectors for direct integration into vehicle applications.

Digi remote management software provides easy setup, configuration and maintenance of large installations of Digi TransPort devices.

Features/Benefits

- **Enterprise class cellular routers with advanced dynamic routing, security and firewall features**
- **CAN Bus support and rugged enclosure options**
- **High speed cellular interfaces: GSM EDGE, HSPA, HSPA + and CDMA EV-DO**
- **Optional integrated 802.11a/b/g/n Wi-Fi access point and 4-port Ethernet switch**
- **Flexible interfaces including serial (async/sync), GPS, USB and telemetry, with flexible DC power options**
- **Powerful integrated end user programming**
- **Digi remote management software for easy setup,**

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Specifications

	Digi TransPort® WR44/WR44R	Digi TransPort® WR41
Interfaces		
Serial:		
Async Port Type	1 DB-9 RS-232 built-in; 3 RJ-45 RS-232 (option)	1 RJ-45 RS-232 built-in; 3 RJ-45 RS-232 (option)
Sync Port Type	1 Sync/Async DB-25 RS-232/422/485 (option)	
Signal Support	TXD, RXD, RTS, CTS, DTR, DSR, DCD, RI (No DSR/RI for RJ-45 ports on WR41 & 3 port serial card; RS-422/485 and sync signals available on request)	
Flow Control	Software (XON/XOFF), Hardware supported	
COM Port Redirector	Digi patented RealPort®	
Ethernet:		
Ports	4-port auto switch with auto MDI/MDX options (configurable non-switch/mini-switch modes)	1 Ethernet port, Auto MDI/MDX
Specifications	IEEE 802.3 10/100 Base-T (auto-sensing) Full or Half duplex	
Other:		
Wi-Fi (Option)	802.11b/g access point and client mode (a/b/g/n option for WR41); Open or shared key authentication; WEP (64 and 128 bit) encryption; WPA/WPA2 with Radius (WPA Enterprise and pre-shared keys); Support for multiple access point mode; 2 x 50 Ω male reverse SMA antenna connector (external); Transmit Power: 17 dBm ± 2 dBm; Receive Sensitivity: 54 Mbps OFDM, 10% PER, -70 dBm, 11 Mbps CCK, 8% PER, -83.5 dBm	
GPS (option)	50 channel GPS engine (-163 dB sens.); NMEA 0183 V2.3 sentence output; 50 Ω SMA antenna connector with +3.3VDC active antenna drive; NMEA stream to local serial port or over TCP/IP; Galileo ready	
Telemetry	1 x DI plus 1 x DIO built-in (via optional Molex connector); I/O telemetry module option (1 relay, 1 digital in, 4 digital out)	I/O telemetry module option (1 relay, 1 digital in, 4 digital out)
USB Host Port	1 Type A connector for expansion; Support for full or low speed	
Miscellaneous	CAN Bus (optional), ISDN (BRI) - v.120, X.75, v.110; DialServer (dial tone simulator); PSTN	
General Features:		
Status LEDs	DTE, Ethernet, Power on, Cellular link/activity, Signal strength, Wi-Fi	
Mounting	Bulkhead mount, Wall mount and DIN rail options available	
Security/VPN	RADIUS, TACACS+, SSL, SSLv2, SSLv3, FIPS 197, L2TP, (5 tunnels included - 50 max. on WR41, 200 max. on WR44); IPSec with IKEv1, IKEv2, ISAKMP; DES, 3DES and AES up to 256-bit encryption; Simple Certificate Enrollment Protocol (SCEP) for X.509 certificates, Open VPN and PPTP; IPSec/PPP/L2TP VPN Server support; IP pass-through	
Router/Firewall	Bridging, NAT/NAT-Traversal, NAPT forwarding; PPP, PPPoE, GRE; IP Routing Protocols: PPP, GRE, RIP (v1 & v2), OSPF, SRI, BGP; IP Failover: VRRP, VRRP+™; VLAN support; STP (Spanning Tree Protocol); Stateful inspection firewall with scripting; Modbus over UDP/TCP; DHCP; Dynamic DNS client compatible with BIND9/No-IP/DynDNS; Automatic failover/failback to second GSM network/Standby APN; Optional IPv6	
Sync/Specialty	Protocol switch; Sync tunneling: LAPB, RAW SNA, SNAIP, SLSw, IP/PPP over X.25; X.25/X.28; TPAD, APACS30, X.25, X.28, PAD, X.29, X.31, X.21, XOT, SSL	

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General Features, Con't.		
Management	HTTP, HTTPS, FTP, SFTP, SSL, SMTP, SNMP (v1/v2c/v3), SSH, Telnet and CLI for web management; Remote management via software tool (option); SMS management, Protocol analyzer, Ability to capture PCAP files for use with Wireshark	
Local Programming	Python, ScriptBasic, Modbus TCP	
Dimensions (L x W x H)	5.7 in x 8.3 in x 1.6 in (145 mm x 210 mm x 40 mm)	4.7 in x 6.8 in x 1.3 in (12 cm x 17.3 cm x 3.2 cm)
Weight	1.98 lb (0.9Kg)	1.08 lb (0.49 kg)
Other	Standard dual SIM (SIM protection cover option); Conformal coating (option)	Standard dual SIM (SIM protection cover option)
RF Features		
GSM Models		
EDGE	GPRS Class 10/EDGE class 10, Quadband 850/900/1800/1900 MHz	
HSDPA/HSUPA/UMTS	850/1900/2100 or 900/2100 MHz with Rx Diversity	
HSPA+	850/900/1900/2100 MHz with Rx Diversity	
Antenna	HSPA/HSPA+/UMTS: 2 X 50 Ω SMA male antennas, EDGE: 1 X 50 Ω SMA male antenna	
CDMA Models		
EV-DO Rev A	Dualband 800/1900 MHz with Rx Diversity; Optional multi-mode GSM/EV-DO Gobi support; 450 MHz, 3.1 Mbps down / 1.8 Mbps up, R-UIM support	
Antenna	2 x 50 Ω SMA male antennas	
Power Requirements		
Power Input	11-58VDC	8-48VDC
Power Supply	100-240 VAC 50/60 Hz with barrel connector,Optional Molex connector with bare wire leads	100-240VAC 50/60 Hz with barrel connector, Optional barrel connector with bare wire leads
Power Consumption	15W max, 8.5W typ	6W max, 4W typ
Environmental		
Operating Temperature	WR44: 0° C to +60° C WR44 Extended Temp/WR44R: -40° C to +75° C; -20° C to +75° C (Wi-Fi models only) Reduced cellular performance may occur above +60° C	-20° C to +55° C; -25° C to +70° C with reduced cellular performance Wi-Fi models: -5° C to +55° C; -10° C to +70° C with reduced performance
Relative Humidity	20% to 95% (non-condensing)	
Ethernet Isolation	1.5 kV	
Serial Port Protection	15 kV	

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Approvals		
Mobile Certifications GSM/UMTS	PTCRB, NAPRD.03, GCF-CC, R&TTE, EN 301 511	
Mobile Certifications CDMA/EV-DO	CDG TIA/EIA-690, CDG TIA/EIA-98-E	
Wireless Carrier Certifications	Certified by most major carriers. See www.digi.com for current listing.	
Safety	UL 60950, CSA 22.2 No. 60950, EN60950	
Emissions/Immunity	CE, FCC Part 15 Class B (FCC identifier GGL-R1902G), AS/NZS CISPR 22, EN55024, EN55022 Class A, E-Mark	
Vehicle Related Certifications	2004/104/EC, 2005/49/EC, 2005/83/EC, 2006/28/EC, 72/245/EEC, ISO7637-2 Class C	

Hardware Interface Population Options

Interface Name	Interface Type	Technical Description
Sync/Async Serial	1 DB-25 Sync/Async	Provides an X.21/RS422/RS232 synchronous/asynchronous serial port using a DB-25 connector.
Async Serial Port	1 DB-25 Async	Provides an additional asynchronous serial port using a DB-25 connector.
Async Serial Ports	3 X RJ-45 Async	Provides three additional asynchronous serial ports using RJ-45 connectors.
PSTN	1 x PSTN	Provides a PSTN interface that can be used to dial out and receive calls. A PPP session is created over which IP traffic can be sent and received.Includes: • 1x PSTN cable
DialServ	1 x RJ-11 (FXS)	Provides dial tone simulator via an RJ-11/FXS connection to emulate local telco.
ISDN	1 x ISDN	Provides an ISDN Basic Rate Interface (BRI) via an RJ-45 port. This can be configured either as a TE (terminal endpoint) or as NT-1 (network termination). The option also includes an additional asynchronous serial port via a second RJ-45 port.
ISDN-U/PSTN	1 x ISDN-U, 1 x PSTN	ISDN-U interface suitable for the USA plus PSTN interface. Can be configured for Bell-103 modulation in leased line mode as well as a normal PSTN interface.
Telemetry 1	4 x Isolated Analog I/O, 4 x Non-isolated Digital I/O	Provides 4 opto-isolated digital input ports and 1 opto-isolated digital output port. It also provides a relay I/O port, a voltage monitoring port and internal temperature monitoring. Fully programmable via Python for embedded Digi TransPort applications. Includes: • 1 x mating connector
Telemetry 2	4 x Isolated Analog I/O, 4 x Non-isolated Digital I/O	4 Analog/4 Digital I/O fully programmable via Python for embedded Digi TransPort applications. Includes: • 1 x mating connector
GPS	Internal GPS	Provides internal GPS capabilities using an SMA connector. Includes: • 1 x GPS magnetic-mount antenna
Fleet	1 x Canbus, 1 x J1708, GPS, 4 x Non-isolated Digital I/O,1 x Ignition Sense, 3 Axis Accelerometer, Power Control of Digi TransPort	Flexible transportation/fleet focused applications requiring GPS, CAN, I/O and ignition sense interfaces. Fully programmable via Python. Includes: • 1x GPS magnetic-mount antenna • 1x fleet power cord • 1x 15-pin telemetry cable